AMENDMENTS TO THE CLAIMS

1.-25. (Cancel)

26. (Currently Amended) A method of enhancing in an individual an immune response generated by a nucleic acid vaccine, said method comprising administering a compound which is an imidazoquinoline amine, imidazopyridine amine, 6,7-fused cycloalkylimidazopyridine amine, 1,2-bridged imidazoquinoline amine, thiazolo- or oxazolo-quinolinamine or pyridinamine, imidazonaphthyridine or tetrahydroimidazonaphthyridine amine, wherein the compound is administered topically or transdermally to the individual only 12 to 36 hours after the nucleic acid vaccine is administered, and wherein the nucleic acid vaccine comprises a nucleotide sequence that encodes an HIV-1 gag protein or fragment containing a gag epitope thereof and a second HIV antigen or a fragment encoding an epitope of said second HIV antigen, operably linked to a heterologous promoter.

27. (Cancel)

28. (Previously Presented) The method of claim 26, wherein the compound is imidazoquinoline amine.

29. (Previously Presented) The method of claim 26, wherein the compound is imiquimod or resiquimod.

30. (Previously Presented) The method of claim 26, wherein the nucleic acid vaccine is administered topically or transdermally.

31. (Previously Presented) The method of claim 26, wherein the nucleic acid vaccine is administered in the form of particles.

32. (Previously Presented) The method of claim 26, wherein the compound is administered in the form of particles.

33. (Previously Presented) The method of claim 26, wherein the nucleic acid vaccine or compound is coated on a core carrier.

34. (Previously Presented) The method of claim 31, wherein the nucleic acid vaccine or compound is administered using a needleless syringe.

35. (Previously Presented) The method of claim 26, wherein the compound is administered in the form of a cream.

36. (Previously Presented) The method of claim 26, wherein the administration of the nucleic acid vaccine is repeated to provide a primer and booster administration.

37. (Previously Presented) The method of claim 26, wherein the second antigen is selected from the group consisting of Nef, RT, and a fragment containing an epitope of Nef or RT.

38. (Previously Presented) The method of claim 26, wherein the gag protein comprises p17.

39. (Previously Presented) The method of claim 38, wherein the gag protein additionally comprises p24.

40. (Previously Presented) The method of claim 26, wherein the gag sequence is codon optimized to resemble the codon usage in a highly expressed human gene.

41. (Previously Presented) The method of claim 37, wherein the RT sequence or fragment thereof is codon optimized to resemble a highly expressed human gene.

42. (Previously Presented) The method of claim 26, wherein the nucleotide sequence encodes a Nef protein or epitope thereof.

43. (Previously Presented) The method of claim 26, wherein the nucleotide sequence is selected from the group consisting of:

Gag (p17,p24) Nef truncate,

Gag (p17,p24) (codon optimized)Nef(truncate),

Gag (p17,p24)RT Nef (truncate),

Gag (p17,p24)codon optimized RT Nef (truncate), and

Gag (p17,p24) codon optimized RT codon optimized Nef truncate.

44. (Previously Presented) The method of claim 26, wherein the heterologous promoter is the minimal promoter from HCMV IE gene.

45. (Currently Amended) The method of claim [[26]]44, wherein the 5' of the promoter comprises exon 1 of the HCMV IE gene.

46. (Previously Presented) The method of claim 26, wherein the nucleic acid sequence is in the form of a double stranded DNA plasmid.

47. (Previously Presented) The method of claim 26, wherein the nucleic acid sequence encodes Gag (or a fragment thereof which comprises an epitope) and RT (or a fragment thereof which comprises an epitope) and Nef (or a fragment thereof which comprises an epitope) in any order.

48. (Previously Presented) The method of claim 47, wherein the nucleic acid encodes the proteins, or fragments thereof, in the sequence Nef-RT-Gag, RT-Nef-Gag or RT-Gag-Nef.

49. (Previously Presented) The method of claim 26, wherein at least one of the proteins which is encoded by the nucleic acid is a fusion protein.